# Best Practices in Transit-Oriented Development

City of Reno, Nevada

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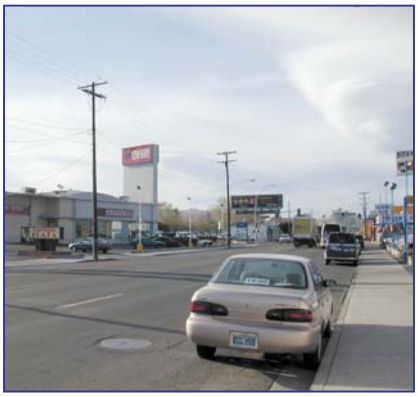
CLARION

# Introduction

The purpose of this document is to report on state-of-the-art practices in planning for successful transit-oriented development. It is intended to serve as a resource for City Planning staff during the preparation of Corridor Plans for six Transit Oriented Development (TOD) Corridors outlined in the 2002 Truckee Meadows Regional Plan.

In undertaking this effort, one of the most important steps we can take is to look critically at the many cities and regions across the United States that are in various stages of implementing TOD programs. Although early TOD programs were focused largely around light rail (LRT) or commuter rail stations, it is worth noting that with many cities, including Reno, seeking to encourage infill and redevelopment within established areas, the definition and application of the transit-oriented development model has evolved to encompass areas served by bus rapid transit (BRT) and even standard bus systems.



*Virginia Street—over ten miles in length— is Reno's highest priority TOD Corridor.*

A diverse range of cities are involved in transit-oriented development initiatives, with mixed results. According to a recent *Urban Land* article, the experiences of many cities is that transit has not created real estate booms around stations; in other cases stations have attracted low-density "transit-adjacent" development rather than development that is transit-supportive. Other communities, however, have achieved greater success, as a result of progressive planning that is coordinated with development-friendly policies.

*High-density housing is beginning to spring up throughout Downtown Reno increasing its vitality and helping break a citywide trend of low-density land use patterns.*

It is easy to talk about and to enthusiastically endorse the idea of mixing uses in a compact area or district, or within a single development site. The planning literature is replete with articles outlining the benefits of such a land use pattern. However, the Clarion team has learned from our varied experiences that translating mixed-use planning goals into actual development practice is challenging and complicated, and requires a deliberate approach such as that proposed for Reno's TOD corridors.

## LESSONS LEARNED

What are some of the key lessons learned from other cities around the country that Reno can use to complement its TOD Corridor Planning effort? What are the most important elements to include in a TOD Corridor Plan? Are these elements at all different for BRT versus LRT? How have other cities addressed the incremental implementation of these elements over time when high frequency transit may be years away?

*Plano, Texas (Top) and Boulder, Colorado (Bottom) are two cities that have used transit-oriented development as a tool to leverage infill and redevelopment and economic development. Both have been successful despite differences in transit modes.*

http://www.ci.boulder.co.us/cao/brc/932.html

http://www.planoengineering.org/amicus/amicus1.htm

Following is a brief summary of considerations to help answer these and other questions regarding the how's, why's and what's of transit-oriented development in Reno and to help guide the subsequent development of the city's TOD Corridor Plans when used in conjunction with the TOD Corridor Plan Template. This summary is based on our experiences working with other communities around the country on the development of mixed-use and transit-oriented development regulations and strategies. Additionally, we conducted background research for this project to gain a general understanding of practices and strategies currently being utilized by communities across the country in addressing transit-oriented development in a more general context, as well as specifically for BRT systems.

### Align Planning and Zoning Standards with TOD Goals

In order to achieve mixed-use development, it is important that the zoning standards and guidelines applied to mixed-use development be no more onerous than those applied to a more conventional, single-purpose development. In other words, "create a level playing field"—make sure that the city's zoning regulations and procedures do not make it more difficult for the developer to build a mixed-use project than a conventional single-purpose project. Although the number of commercial real estate and lending industries specialists familiar with the complexities of seeing a mixed-use development to fruition as grown dramatically in recent years, in many areas of the country such experience remains difficult to find locally. Accordingly, it is imperative that any new zoning provisions to implement the strategy, as well as any new design standards and guidelines, work to make mixed-use development as much of a "by-right" development option as possible. This is a lesson from Montgomery County, Maryland, where development has lagged around several Metro stations, because developers shied away from what they viewed as a more complicated development review process and tougher standards. We do not think that means sacrificing quality design and controls on such development; it does mean that any standards adopted should be simple, clear and concise to lend as much certainty to the process as possible and development review procedures be efficient and streamlined.

### Address Developers' Concerns about Risk and Financing Issues

Partnerships with and education of the development financing community can address financing problems that may exist for innovative development types such as mixed-use projects. Public-private partnerships show that the local government is serious about supporting mixed-use development and helping to ensure that it succeeds. An example of this can be found along Portland's West Corridor MAX line, where early TOD projects were heavily dependent upon public/private partnerships for implementation. However, the complexity of these early projects has also helped set the stage for future projects, both in Portland and around the country, by serving as a "testing ground" for transit-oriented development, expanding awareness of TOD as well as the pool of national lenders and

developers experienced in the idiosyncrasies of the process. In the years since, other cities such as Denver and Dallas have followed suit and have seen an extensive increase in TOD projects along major transit corridors.

### Development Standards

Good design cannot be guaranteed through regulation. Design standards can ensure a minimum level of quality, but overly prescriptive regulations can deter the best developers. The policies and standards that apply to TOD corridors must be simple and clear in their intent, concise in their wording, and firm, yet not completely prescriptive in the direction they give. The standards should focus on what is important to the success of the corridors, and not go "overboard" in seeking to achieve the best possible outcome. An increasing number of communities are using a menu approach to development standards, allowing developers to select among options to achieve design goals. Links to sample overlay districts from several other cities are provided on page 11 for reference.

*Increasing development intensity doesn't always mean starting with a clean slate—these residences were incorporated above existing storefronts (similar to those found along portions of South Virginia Street and the 4th Street Corridor in Reno) along East Pearl in Boulder, Colorado.*

### Compatibility with Existing Development

Zoning standards that require or encourage mixed-use development typically allow relatively high development densities and intensities, which may be—if built to the maximum allowed—substantially greater than the development densities and intensities in surrounding areas. Thus, one of the most important considerations is compatibility of new, mixed-use development with its neighboring land uses. If not addressed up-front, it is likely that city residents who live next door to a proposed mixed-use development will react negatively to the prospect of a more intense land use neighbor. The city must work with residents to identify the benefits of such changes, convince them the benefits justify changes in traffic and other topics of contention, and demonstrate their concerns will be addressed in the final products. It is important to engage those who live or work in the city's existing neighborhoods before specific zoning changes are proposed and to have adequate regulations on the books to protect surrounding neighborhoods.

*These townhomes in Arlington, Virginia are designed to look like a single-family home from the street, providing a more gradual transition from higher-density apartments at the Clarendon METRO station (behind) to the surrounding single-family neighborhood.*

### Include Housing as Part of the Mix

Housing is essential to the long-term success of transit-oriented development because to a greater extent than transit users along the corridors, residents frequent restaurants, galleries, and other public places that make these areas thrive. They extend activity into the evening and weekends, and once extended, outsiders are attracted to the activity centers as well. Reno is already working towards this end in its downtown, where several new high density housing projects have been completed in the last year and several more are in the planning phases along the Truckee River in the heart of downtown.

### Consider Incentives as Well as Regulations

Zoning and other regulatory tools that facilitate mixed-use development are not the only factors at play affecting how well the real estate industry responds to the idea of mixed-use. The City may need to prime the pump with financial inducements, such as investment in targeted public facilities and capital improvements.

The city might also create funds for streetscape or façade improvement loans, available not only for new development, but also existing business owners in areas targeted for mixed-use. Non-financial incentives, such as density bonuses, reduced parking requirements, and streamlined and well-coordinated review procedures, are also important tools to consider.

Many of these incentives have been incorporated as part of a form-based code for a 3 ½ mile stretch of the Columbia Pike corridor in Arlington County, Maryland. The optional overlay offers developers and property-owners opportunities that far exceed by-right zoning in the corridor, which is characterized by one-story, auto-oriented shopping centers—very similar to those found along many of Reno's TOD corridors. While the overlay has only been in place for a short time, millions of dollars worth of development proposals are currently in the pipeline—a significant accomplishment, considering the corridor had seen little, if any development activity in recent years.

### *Plan with a Long-Term Vision in Mind*

One of the most difficult tasks many communities face is planning for transit-oriented development along transit corridors that may not be served by transit for many years to come. Challenges arise when development proposals are submitted that do not meet the long-term vision for the corridor yet are difficult to turn away due to immediate development pressures, short-term market demands, and the rights of property owners under existing zoning regulations. Perhaps the most important lesson learned for Reno as it undertakes subsequent planning efforts for its TOD corridors is that it will be most effective when tackled with an incremental approach tailored to the unique characteristics and factors influencing each corridor. In the short-term, an emphasis should be placed on achieving transit-oriented development in key areas of High Priority Corridors, where on-the ground results will be most visible and have the highest probability of success. In Low and Moderate Priority Corridors, efforts can be more focused on ensuring that current development activity does not preclude transit-oriented development in the future by requiring phasing strategies, restricting uses, and monitoring changes in market conditions that may warrant additional study. A Plan recently completed for the East Colfax Corridor in Denver sets a "big picture" vision for the corridor as a mixed-use activity center, but acknowledges issues of market, existing land use and ownership patterns, and ridership among others as hurdles to the wholesale implementation of the Plan. Policy recommendations are provided at both a corridor-wide level and for specific locations within the corridor to address short and long-term strategies for implementation.

East Colfax present

East Colfax future

*Blueprint Denver, the city's award winning plan to integrate land use and transportation, has identified the East Colfax corridor as a priority Area of Change where the city should direct growth in order to connect people to jobs, housing and the transportation system.*
http://www.denvergov.org/EastColfax/EColfaxSmallAreaPlan.pdf

# Best Practices

The following is a summary of some of the current practices for designing and implementing transit oriented development. It is intended as an information resource for city planning staff, the Planning Commission, City Council, and others involved in planning for TOD corridors in the city and region. It will serve as a background document for development of Corridor Plans which will guide land uses, urban design and implementation strategies along Reno's designated TOD corridors.

A review of practices from cities across North America indicates that TOD is a unique form of urban development. No two areas are the same. How an area is planned and developed will depend on the particular attributes of that corridor and surrounding community. However, the following key components are commonly found to be critical to the success of any transit oriented development.

There are eight "Best Practices" identified on the following pages:

- ☑ Establish an Identity
- ☑ Focus Attention on Supporting Infrastructure
- ☑ Create Places that Attract People
- ☑ Promote Development Intensity/Density
- ☑ Create Convenient Pedestrian Connections through Street Patterns/Connectivity
- ☑ High Quality Site Layout and Urban Design
- ☑ Manage Parking
- ☑ Incorporate Public Space and Greenways

In addition to a description of the desired objectives of each of the eight Best Practices, we have included a set of recommended policies, and examples that illustrate how each of these practices is being implemented in other communities. Where possible, internet links have been provided to guide users of this document to additional information on examples of specific plans, policies, guidelines, or other useful information. Based on our experience, strategies for addressing transit oriented development do not vary dramatically between communities planning for BRT versus those planning for LRT or Commuter Rail. However, to provide more of an "apples to apples" comparison, BRT examples have been incorporated wherever possible.

*Englewood, a suburb of Denver, created a transit-oriented town center adjacent to its new light rail station on the site of a defunct shopping mall.*

*http://www.englewoodgov.org/*

*Housing and office space were incorporated above old single-story storefronts (not unlike those found along portions of South Virginia Street) along Boulder, Colorado's East Pearl District, protecting the historic character of the area while providing new housing options and intensifying densities. The corridor is served by high frequency bus service.*

## ESTABLISH A DISTINCTIVE IDENTITY

To ensure that TOD corridors are compatible with the established framework of the city, each area's identity, in terms of its mix of uses, development intensity and character, should largely be informed by and relate to the surrounding development context. Corridor Plans should fully describe, in both an illustrative and narrative manner, important physical and visual relationships between the corridor and the surrounding area as well as the key identifying features that will define and be associated with the corridor in the future. Policies should address the following:


*Denver, Colorado has encouraged the preservation and reuse of historic buildings on its 16th Street Pedestrian and Transit Mall.*
*http://www.denvergov.org/NeighborhoodAreaPlanning/template37424.asp*

### *Build on Key Identifying Features of Each Corridor*

Each corridor should have a distinct identity that sets it apart from other corridors and other areas of the city. Where they are clearly distinguishable and transit-supportive, Corridor Plans should build on the identifying features of each corridor, and its "nodes" where applicable, allowing them to shape future land use patterns, development intensities, and mix of uses. In some cases, such as the South Virginia Street Corridor, a corridor may have multiple identifying features or characteristics along its length that can be emphasized to help break it into more manageable pieces. An example of this is the Columbia Pike Corridor in Arlington County, VA, where plans for intensification along the 3.5 mile corridor have been focused in four distinct "nodes" of activity—a gateway, neighborhood center, village center, and a town center—each of which varies in scale, intensity, and character.

http://www.co.arlington.va.us/forums/columbia/concept/index.htm

*When Bogota, Colombia implemented their BRT, Transmilenio, they made vast infrastructure improvements that included stations, pedestrian overpasses and sidewalks.*

*http://www.bogota-dc.com/trans/transmil.htm*

### *Build on Surrounding Development Context*

The surrounding development context is an important consideration when planning the character, intensity, and types of future uses for each corridor. Important considerations include the existing pattern of development, such as the scale and general character of surrounding development, including building heights, linkage opportunities, and land use mix. Corridor Plans should include an assessment of surrounding development context, in conjunction with the corridor's identifying characteristics, to develop refined polices for the area and shape long-term plans and strategies for the area.

## FOCUS ATTENTION ON SUPPORTING INFRASTRUCTURE

In order to encourage and facilitate successful transit-oriented development, a full range of public facilities must be in place. A variety of infrastructure improvements will need to be made within each corridor in order to accommodate the type of urban, mixed-use neighborhood development that is desired. For example, improvements may be necessary to correct the shortcomings of

existing development patterns, such as streets that need to be reconfigured, suburban "superblocks", and a lack of sidewalks and other pedestrian connections. Specific infrastructure needs will vary by corridor type and location and should be evaluated as a factor in determining corridor development priorities. Public infrastructure investments should be focused and prioritized where development is most desirable. Policies should include the following:

### *Coordinate Capital Improvement Plans*

Well-designed public amenities and infrastructure will attract development. Individualized and targeted capital improvement plans should be coordinated to facilitate development in transit-oriented development areas. This can be done by ensuring that adequate public facilities, including streets and pedestrian amenities, are in place in advance of or can be completed concurrent with development in priority areas.


*The Clarendon Metro Station area in Arlington, Virginia contains a vibrant mix of uses, including restaurants, parks, apartments, and shops.*

*http://www.planclarendon.com/*

## CREATE PLACES THAT ATTRACT PEOPLE

Establishing a mix of complementary land uses within a TOD corridor allows individuals to meet their day-to-day needs within walking distance of their home or place of work; creating a neighborhood environment that increases transit use, extends hours of activity, and reduces traffic. The overall mix of uses will vary by corridor and will be determined when a detailed Corridor Plan is prepared. Policies should include the following:

### *Encourage a Mix of Complementary Uses*

The incorporation of complementary and transit-supportive uses, such as residential, office, restaurants, and retail uses should be encouraged within all corridors. Particularly in areas surrounding transit stops, a vertical mix of uses is preferred to facilitate higher development intensities. It is anticipated that development at designated activity nodes along the corridors will occur at higher densities. Typically, a vertical mix of uses should incorporate active uses, such as stores and restaurants, at the street level and residential or office uses on the upper floors. In Low and Moderate Priority Corridors, a vertical mix of uses is unlikely to occur in the short-term, therefore, a horizontal mix of uses should be encouraged as an interim alternative. The appropriate mix should provide a variety of goods and services to the adjacent neighborhood and establish a central gathering space for patrons and residents.

*Development at Mockingbird Station in Dallas has become a major attraction for area residents, providing a vibrant mix of urban uses (primarily housing and retail) in an otherwise suburban area.*

*http://www.mockingbirdstation.com/*

### *Define Appropriate Uses and Mix for Each Corridor*

Each corridor should contain uses that are transit supportive, compatible with adjacent development, and provide a balance of service, entertainment, employment, and housing options that will make the corridor a safe, inviting place to live and


*This Wal-Mart was incorporated as part of the Englewood Town Center (Colorado) and is located within ¼ mile of the LRT station. In addition to having a smaller footprint than its more suburban counterparts, it provides clear pedestrian linkages to adjacent residential/retail and reduced parking.*


*Smaller stores typically located along suburban corridors can also be successfully incorporated below residences in a more urban form, such as this 7-Eleven in Denver's Uptown neighborhood.*

work. Appropriate, transit-supportive uses may include, among others:

- Medium and high density offices and residential;
- Retail and personal service businesses;
- Hotels;
- Restaurants;
- Urban parks;
- Day care facilities; and
- Public agencies or community uses.

Plans for each corridor should define an appropriate mix of uses. Typically, this should include a minimum percentage of employment, retail, and residential uses for the overall planning area. These percentages will vary depending on the characteristics of each corridor, and should be established through a development phasing and land use mix schedule included in the Corridor's Plan. The mix of uses should be monitored over time as each phase of the corridor is developed, through a status report included with all development applications that indicates how the proposed development is in compliance with the Corridor Plan's phasing/mix schedule.

## *Discourage Auto-Oriented Uses*

Auto-oriented uses such as auto repair and service shops, large-format commercial "super-stores", and drive-through restaurants should generally be avoided in identified activity nodes; however, the use of creative site layout and design techniques as described in the policies of this plan to develop transit and pedestrian-supportive prototypes that would be appropriate within areas may be considered. Transit-supportive prototypes would include an overall reduction in scale that accommodate reduced parking areas, building setbacks, and building footprints (for example, "super-stores" and other large commercial uses would be typically be restricted to less than 50,000 square feet). In addition, prototypes would seek to minimize conflicts between automobiles and pedestrians and provide attention towards pedestrian orientation and accessibility.

## *Incorporate a Variety of Housing Types*

Incorporating housing as a prominent use within transit-oriented development areas not only helps meet citywide demand for homes, but also provides a "built in" population base that supports shops and restaurants, utilizes transit, and will help establish the corridor as a self-sufficient neighborhood within the city. Transit-oriented development areas should incorporate a diversity of housing choices that includes a mixture of densities, styles, and price ranges (including affordable housing) to help establish the corridors as distinct neighborhoods that appeal to and are attainable by a broad segment of the

community's population. Housing mixtures will vary by corridor type and location, and may vary from a mixture of high-density apartments and condominiums in the urban corridors to a more moderate-intensity mixture of apartments, townhomes, and single-family attached homes in the suburban corridors. Corridor plans should define the appropriate variety of housing types for each corridor as appropriate based on existing context and desired development patterns.

*A mixture of housing types is desirable within TOD Corridors, ranging from apartments to townhomes, to small lot single-family.*

## *Concentrate Mixed Uses in Centrally Located, High Visibility Areas*

Concentrate mixed uses in centrally located, high visibility areas such the area surrounding the transit stop where they will be accessible to a variety of people from a variety of modes. Using transit amenities as a focus helps increase the visibility and marketability of development sites, create a vibrant neighborhood core with increased hours of activity, and encourage pedestrian activity. Smaller pedestrian scaled mixed use centers are also appropriate and should be located at prominent street intersections.

## *Encourage Active Uses at the Street Level*

Buildings containing a mix of uses should encourage active uses, such as shops and restaurants, to occur at the street level where they can be easily viewed and accessed by pedestrians and transit patrons. In order to maintain an active street presence, residential or office uses should be limited to upper floors wherever feasible. The area or number of blocks that contain active street level uses will vary by corridor type, depending on the area's demographics and predominant development pattern and may range from a handful of shops and restaurants surrounding a transit stop in a suburban corridor, to a multi-block shopping and entertainment district in an urban corridor. The extent and location of these uses will need to be carefully evaluated during the corridor planning process to ensure that the amount and mix of non-residential uses are in line with market demand.

*Dallas has built their new Police Headquarters directly next to Cedars Station in downtown Dallas.*

*http://www.dart.org/cedarsstation.asp*

## *Integrate Public Facilities into Corridor Development Patterns*

Corridors can be the ideal location for public facilities given their high visibility, accessibility to a variety of modes, and large concentrations of residents and employees. In corridors that are currently underserved, the incorporation of public facilities is strongly encouraged, including: schools, libraries, government service centers, recreation centers, and police substations. Public facilities should be integrated into the core of the corridor to help establish the area as the civic "center" of the neighborhood, increase the visibility and accessibility of the services being provided, and to support transit ridership.

*This high-density, mixed-use project in Denver's Uptown Neighborhood was incorporated on the site of a former hospital campus incorporated hundreds of new units and spurred a number of additional projects in the area.*

http://www.downtowndenver.com/housing/uptown.htm

## PROMOTE DEVELOPMENT INTENSITY/DENSITY

Higher density development is one of the key components necessary to create compact, vibrant transit-oriented development neighborhoods that encourage pedestrian activity, support retail businesses, and promote transit usage. Overall intensities of development will vary based on area type and on the surrounding development pattern; however, intensities are typically encouraged to be significantly higher than in other more suburban sectors of the city, to boost accessibility to transit and allow uses to support one another. Policies should include the following:

### *Establish Residential Density Targets*

Residential density targets should be established for each corridor by corridor type. To provide flexibility and encourage a variety of development intensities and heights within each corridor, a net density range for each corridor type is specified. Minimum density and height requirements e ensure that development intensities in the core are transit-supportive and that early phases of development are not built at densities that are too low. Minimum densities outlined in the Regional Plan should be reviewed and additional specificity should be applied as part of the Planning Process to ensure that heights and densities meet the specific needs of each corridor.

**SAMPLE RESIDENTIAL DENSITY TARGETS:**

| CITY | TRANSIT TYPE | MINIMUM DENSITY (DWELLING UNITS/ACRE) | TOOL |
|---|---|---|---|
| Boulder, CO | Bus | Regulated through height limitations and maximum FAR, varies by location/character of mixed use district | Mixed Use Zone Districts |
| Portland, OR | Light Rail | Minimum FAR 1:1 | Light Rail Transit Station Overlay Zone |
| Charlotte, NC | Light Rail | 15-20 (1/2 mi-1/4 mi) | Transit Oriented Development Districts Residential/Employment/ Mixed-Use) |
| Eugene, OR | BRT | (ND): 12 average (minimums range from 8 to 30 dependent upon base zoning)<br>(TD): Min FAR of 2.0 in core, 1.0 in surrounding zone. | Nodal Development Overlay Zone (ND)<br>Transit Oriented Development Overlay Zone (TD) |
| Mountain View, CA | Commuter Rail | 15-20 average (6-40 sliding scale depending upon location) | Transit Overlay Zone |

***SOURCES:***

http://www.ci.boulder.co.us/cao/brc/932.html (Boulder, CO)

http://www.planning.ci.portland.or.us/ zoning/ZCTest/400/450_Transit.pdf (Portland, OR)

http://www.ci.charlotte.nc.us/NR/rdonlyres/eczrlnbnf66eyi4s3h5snaq72ob43vgohrpupucumu5sk4mjsiz6q7nwv2s5mbnu7w23nvz3bh3z2fxgrwhsgynx6ih/2003090TextAmendmentApproved.pdf (Charlotte, NC)

http://www.ci.eugene.or.us/Cityreco/Citycode/Chapter9/c9.4000-5850.htm (Eugene, OR)

http://www.ci.mtnview.ca.us/citydepts/cd/apd/downtown_framework.htm#d (Mountain View, CA)

### *Provide a Transition in Height and Density*

Transitions between the more intense heights and densities encouraged along the corridors and those of surrounding development should be provided to ensure compatibility with adjoining neighborhoods. Transitions may be provided by "stepping down" the height of structures, reducing lot coverage, increasing open space, increasing architectural detailing, reducing permitted maximum densities, changes in use, or a combination of these methods.

### *Encourage Infill and Redevelopment*

Infill and redevelopment should be encouraged within corridors to achieve higher densities and a greater mix of transit supportive uses. Corridor Plans should identify opportunities for infill and redevelopment, particularly within suburban corridors, where existing development patterns consist primarily of a single, low-intensity use, or on vacant or underutilized parcels within more urban corridors.

*Mountain View, California's TOD development, "The Crossings", was built in place of an old shopping mall.*

*http://www.ci.mtnview.ca.us/citydepts/cd/apd/adv_plan.htm*

## CREATE CONVENIENT PEDESTRIAN CONNECTIONS

Street networks supporting transit-oriented development areas need to accommodate and encourage the use of alternative modes as the preferred method of travel within and between corridors. Alternative modes include bus transit, walking, and bicycling, in addition to feeder transit services. A clear, direct street network designed with a hierarchy of interconnected streets eases conflicts between modes and encourages the efficient movement of people. Policies should include the following:

### *Establish a Range of Acceptable Block Lengths*

Corridor block lengths should be compact to facilitate pedestrian accessibility and connectivity and to provide a clear framework for development. Appropriate block lengths may vary by corridor type and context, but should fall within a range of 200 to 400 feet.

*Well-marked crosswalks help pedestrians to feel safer in Arlington, Virginia (Clarendon Station)*

*http://www.planclarendon.com/*


*Illustrative directional signage helps get bus and rail passengers to and from transit in the Rosslyn/Ballston Corridor in Virginia and along Denver's 16th Street Mall. In addition, signage can be used to help orient visitors to other points of interest.*

*http://www.denvergov.org/NeighborhoodAreaPlanning/template37424.asp*

## *Establish an Interconnected Network of Multi-Modal Streets*

An interconnected hierarchy of streets should be established to clearly define primary pedestrian and vehicular travel routes between corridor uses and to uses adjoining the corridor. Streets should be designed to accommodate all modes comfortably and should provide a separation between incompatible modes, such as bicycles and pedestrians where possible. Cul-de-sacs or other dead end streets should be strongly discouraged.

## *Create a Safe and Inviting Environment for Pedestrians*

A safe and inviting streetscape environment should be established to help promote pedestrian activity. Streetscape amenities such as street trees, benches, cross walks, and decorative paving should be used to enhance the pedestrian environment; while paved crosswalks, medians for refuge on large streets, and signal timing should be used to ensure pedestrian safety and manage traffic flow.

## *Establish a Coordinated Way-Finding and Signage Program*

A coordinated way-finding and signage program for corridors should be established to assist transit passengers, corridor residents, and other patrons. Program elements should include standard directional signage for all corridors that provides assistance in locating transit stations and schedules, parking, restrooms, and other public facilities.

## *Limit Access Points along Major Thoroughfares and Pedestrian Routes*

Driveway access points should be minimized along major thoroughfares and pedestrian routes to minimize conflicts between vehicles and pedestrians and maximize the availability of on-street parking spaces. Shared parking and driveway access points should be encouraged where possible.


## WHAT MAKES A PLACE PEDESTRIAN-FRIENDLY?

- A pedestrian grid with fine-grained intersections, preferably every 200′ or less
- Direct sidewalk connections to key destinations at safe, convenient points
- Visual cues such as sight lines, view planes and orienting landmarks to support way-finding
- Sidewalk widths adequate for social use (6′ to 20′ depending on location and use)
- Pedestrian plazas provided to create places and tie buildings and uses together
- Direct, continuous, buffered sidewalks across any large parking areas
- Walkways and sidewalks that are protected from obstructions, such as parked vehicles
- Complete provision for the needs of disabled and physically challenged travelers
- Crosswalks at driveways and adjacent streets
- Canopies, awnings and arcades used to provide shelter from sun and rain
- Way-finding information provided at key pedestrian intersections
- Appropriate street furniture and lighting on major walkways

Source: Rail-Oriented Development: Strategies and Tools to Support Passenger Rail, Colorado Department of Transportation: Charlier Associates and Clarion Associates, 2001

*Clarendon Metro TOD is intensely developed near the station (top) with a gradual transition to neighborhood scale development (bottom).*

http://www.planclarendon.com/

*Buildings along Denver's LRT line in the Platte Valley feature a high level of architectural detailing and a very pedestrian-oriented design.*

http://www.downtowndenver.com/business/development.htm

## HIGH QUALITY SITE LAYOUT AND URBAN DESIGN

Corridors should be designed as distinctly identifiable areas that are compatible with and are well integrated into the existing framework of the city. Site layout and design within corridors should incorporate a variety of urban characteristics, such as reduced setbacks, build to lines, concentrations of building mass and height, and a high level of architectural detail, that will help establish them as vibrant places that invite pedestrian activity and maximize transit ridership. Policies should include the following:

### *Concentrate Building Height and Mass at Transit Stops and Activity Centers*

The incorporation of a variety of building heights and forms are encouraged to create visual interest and establish a distinct identity within each corridor. Buildings heights and massing should be most concentrated at the corridor core to increase its visibility and reinforce its importance. Concentrations of mass and height are also desirable at key intersections and along high frequency transit corridors that transport passengers into the corridor core. Outside of the immediate corridor core and away from key intersections and corridors, building heights and massing should transition towards the lower development intensities in adjoining areas.

### *Building Orientation*

Buildings within corridors should be oriented towards the primary street frontage so that entrances are visible and accessible to pedestrians from the sidewalk. Buildings located at intersections should be oriented so that the primary entrance is at the corner.

### *Use Architectural Detailing to Reinforce the Pedestrian Environment*

Although specific architectural styles will vary by corridor location and type, generous architectural detailing, including the articulation of building facades, use of stone and other masonry materials, and incorporation of fenestration, awnings, balconies, and other details, should be incorporated to provide a high level of interest at the street level, where pedestrian activity is desired, and to establish a high standard of quality for corridor development. "Blank" walls, absent of architectural detailing described above should not be permitted.

### *Establish Build-To Lines and Reduce Setbacks*

Traditional suburban development patterns typically site buildings away from streets and place them behind broad setbacks of landscaping or parking. These types of development patterns are not appropriate within corridors where

a more compact pattern of development is desired. Build-to lines that anchor buildings at the sidewalk edge should be established for the corridor core to achieve more intense, compact patterns of development desired in the core. Build-to lines also encourage pedestrian activity by creating a comfortable public space along the street frontage and clear site lines between destinations, providing an element of clarity and continuity in the streetscape. Within the corridor core, selective variation in build-to lines in key areas along a block is encouraged to allow for outdoor restaurants or plazas and to add visual interest to the streetscape. Outside of the corridor core, or in lower-intensity residential areas, where a more flexible pattern of development is appropriate, reduced setbacks should be established in place of build-to lines for different uses.

## MANAGE PARKING

The accessibility of transit within corridors, as well as the desire for more intense development patterns typically permits parking ratios lower than those found in areas not served by transit as well as a number of alternative parking solutions, such as shared parking. The location, treatment, and type of parking used are also important considerations and may vary by corridor type and location. For instance, surface parking may be acceptable in outlying or terminus corridors where transit patrons are being drawn from surrounding communities not accessible by transit and lower development intensities are typical; while a centrally located parking structure may the most appropriate solution in an urban corridor where higher development intensities are typical and land values are elevated. In any case, parking supplies and demands should be monitored and adjusted to address changes in corridor dynamics over time. Policies should include the following:

### *Identify Key Sites to "Land Bank" for Future Development*

Although surface parking within the corridor as a primary site use should be discouraged, the use of surface parking as an interim use to "land-bank" property for future development is strongly encouraged should immediate development of the parcel not be feasible. Sites identified for this purpose must have appropriate regulations in place to facilitate higher intensity, transit-supportive development in place of surface parking as market forces warrant. Sites that are "land-banked" for longer periods of time should be required to meet parking lot landscaping requirements in the interim.

### *Establish Parking Management Strategies*

Parking management strategies should be developed to ensure efficient use of limited corridor parking facilities. Specific strategies should include establishment and enforcement of parking time limits within the corridor, coordinated signage programs to increase the visibility and accessibility of public

*Public parking along the East Pearl Corridor in Boulder, CO is well integrated with surrounding development, but is clearly identified with signage at the street (Top). Bus stops incorporate directional signage and casual seating (Bottom).*

http://www.gettingthere.com/park/NPPparking.html

*A screening wall along a surface parking lot provides a more inviting pedestrian environment in Fort Collins, CO.*

*Portland's Pioneer Courthouse Square, adjacent to a LRT station was built on the site of a former parking lot.*

parking areas, and coordination of these programs with available transit systems.

### *Integrate Surface Parking and Parking Structures into the Surrounding Neighborhood*

Surface parking and parking structures should be designed to be compatible with the scale and architectural character of the surrounding neighborhood. In fact, if well-designed, the primary use of parking structures is sometimes not readily apparent. This can be accomplished by incorporating retail, restaurants, dry cleaners, and other uses into the ground floors of parking structures and by incorporating a similar level of architectural design and detail into parking structures as is used on adjacent buildings. Surface parking should be located to the side or rear of buildings where feasible. When site constraints dictate that parking be placed adjacent to the sidewalk, low screening walls should be used to minimize visual impacts and provide a safe environment for pedestrians.

### *Encourage Shared Parking*

Shared parking for multiple-use developments or adjacent uses can be effective when uses have different peak parking demands and operating hours and should be encouraged within corridors to help meet overall parking needs. A reduction in the number of required parking spaces should be considered provided that a shared parking analysis is provided which:

- Clearly establishes which uses will make use of the shared spaces at different times of the day, week, month, or year;
- Addresses the composition and hours of operation of the uses;
- Rate of turnover for proposed shared spaces;
- Distances of shared spaces from the uses that they serve;
- Availability of on-street parking spaces in the public rights-of-way;
- Anticipated peak parking and traffic loads for the site; and
- Availability of transit facilities and modes of available transit serving the site, including both public and private transit (e.g., car and vanpooling).

## INCORPORATE PUBLIC SPACE AND GREENWAYS

Corridor neighborhoods should be organized around a hierarchy of public spaces and greenways. These spaces are shared by the neighborhood, encouraging community interaction and identity, providing opportunities for recreation, and appropriate spaces for civic buildings. Policies should include following:

### *Use Public Spaces as an Organizing Feature for Development*

Public spaces, such as parks, natural features, and plazas, should be utilized as an organizing feature for corridor development and as a focal point for the corridor neighborhood. In addition, public spaces provide easily accessible open spaces for corridor residents, offsetting the sometimes negative perception of high density neighborhoods. Public spaces should be incorporated into the design of transit stops when feasible to increase the functionality and visibility of the space.

### *Establish a Hierarchy of Open Spaces*

Corridors should contain a hierarchy of open spaces that range from public parks to smaller outdoor rooms and plazas. Spaces should transition from smaller urban spaces near the core to larger parks on the fringe of the corridor. Community amenities, such as fountains, sculpture and other public artwork, seating, and other features that help create identifiable gathering spaces, should be incorporated as part of the public open space hierarchy.

### *Establish Clear Linkages between Public Spaces*

Clear pedestrian and bicycle linkages should be provided within public spaces. Linkages should be provided along primary streetscape corridors and should be designed as urban "greenways" with enhancements such as street trees, benches, pedestrian-scaled lighting, landscape plantings, and other amenities.

*Public spaces will vary from formal gathering spaces, such as the plaza at the Gallatyn Station in Dallas (above), to more neighborhood-scale spaces such as the town center plaza above.*

# Sample Plans:

Following is a list of several transit-oriented development plans produced for other communities with objectives similar to Reno's. While the list is by no means comprehensive and there is no "perfect" model, there is certainly value in reviewing each of the sample plans and identifying key features or elements that are applicable to one or more of Reno's corridors. Links to each of plans are provided below; however, PDF files of the plans will also be included on the final CD for the project.

- East Colfax Small Area Plan, Denver, Colorado

http://www.denvergov.org/EastColfax/EColfaxSmallAreaPlan.pdf

- Columbia Pike Form Based Code, Arlington, Virginia

http://www.co.arlington.va.us/forums/columbia/concept/index.htm

- Farmers Branch Station Area Conceptual Master Plan, Farmers Branch, Texas

http://www.farmersbranch.info/Planning/images/stationareaplan/FB%20Station%20Area%20Conceptual%20Master%20Plan.pdf

- Arapaho Center Station Area Plan, Richardson, Texas

http://www.cor.net/DevelopmentSvcs/PDF/ArapahoCenterPlan.pdf

- Spring Valley and Main Street Station Area Plans, Richardson, Texas

http://www.cor.net/DevelopmentSvcs/PDF/SpringValley-MainStreetPlan.pdf

- San Antonio Precise Plan, Mountain View, California

http://www.ci.mtnview.ca.us/citydepts/cd/apd/san_antonio_station_pp.htm

- New Bern Station Area Plan, Charlotte, North Carolina

http://www.charmeck.org/NR/rdonlyres/emxrh42dlk3zyh4wifttlxtu74wcrtmnsul6klwnfzv4gnpuhomawqxyvb7b5lr3jh5po3m63ldc4bqxgwugltsohkf/New+Bern+Station+Area+Plan.pdf

- Sharon Road West Station Area Plan, Charlotte, North Carolina

http://www.charmeck.org/NR/rdonlyres/ebilf7hyeoxel3kfocxa3qsjxldo7mvwbtel5felznxxsslaqn5qlb6kjiwexha6ro3lwbfzbqqiqpfwd3sgg5axhhb/Sharon+Road+West+Station+Area+Plan.pdf